8.3 Cultural Resources

This section determines whether cultural resources are present and could be affected adversely by the SVEP. The significance of any potentially affected resources is assessed, and measures are proposed to mitigate potential adverse project effects. This study was conducted by Clint Helton, M.A., RPA, a Cultural Resource Specialist who meets the qualifications for Principal Investigator stated in the Secretary of the Interior's standards and guidelines for archaeology and historic preservation (United States National Park Service [USNPS], 1983).

This section is consistent with state regulatory requirements for cultural resources pursuant to the California Environmental Quality Act (CEQA). The study scope was developed in consultation with the California Energy Commission's (CEC) cultural resources staff and complies with *Instructions to the California Energy Commission Staff for the Review of and Information Requirements for an Application for Certification* (CEC, 1992) and *Rules of Practice and Procedure & Power Plant Site Certification Regulations* (CEC, 1997).

Cultural resources include prehistoric and historic archaeological sites[1]; districts and objects; standing historic structures, buildings, districts and objects; and locations of important historic events, or sites of traditional/cultural importance to various groups.[2]

Section 8.3.1 describes the cultural resources environment that might be affected by the SVEP. Section 8.3.2 discusses the environmental consequences of construction of the proposed development. Section 8.3.3 determines whether there are any cumulative effects from the project. Section 8.3.4 presents mitigation measures that will be implemented to avoid construction impacts. Section 8.3.5 discusses the laws, ordinances, regulations, and standards (LORS) applicable to the protection of cultural resources. Section 8.3.6 lists the agencies involved and agency contacts, and Section 8.3.7 discusses permits and the permitting schedule. Section 8.3.8 lists reference materials used in preparing this section.

Appendix 8.3A provides copies of agency consultation letters. Appendix 8.3B provides the resume for Clint Helton. Figure 8.3-1 indicates the ethnographic Native American tribal affiliation of the project area, per CEC Data Adequacy requirements and also depicts the areas of intensive cultural resources survey conducted for the project.

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1 Site – "The location of a significant event, a prehistoric or historic occupation or activity, or a building or structure…where the location itself possesses historic, cultural, or archeological value." (USNPS-IRD 1991:15).

2 The federal definitions of cultural resource, historic property or historic resource, traditional use area, and sacred resources are reviewed below and are typically applied to non-federal projects.

A cultural resource may be defined as a phenomenon associated with prehistory, historical events or individuals or extant cultural systems. These include archaeological sites, districts and objects; standing historic structures, districts and objects; locations of important historic events; and places, objects and living or non-living things that are important to the practice and continuity of traditional cultures. Cultural resources may involve historic properties, traditional use areas and sacred resource areas.

Historic property or historic resource means any prehistoric district, site building, structure, or object included in, or eligible for, inclusion in the National Register of Historic Places. The definition also includes artifacts, records and remains that are related to such a district, site, building, structure or object.

Traditional use area refers to an area or landscape identified by a cultural group to be necessary for the perpetuation of the traditional culture. The concept can include areas for the collection of food and non-food resources, occupation sites and ceremonial and/or sacred areas.

Sacred resources applies to traditional sites, places or objects that Native American tribes or groups, or their members, perceive as having religious significance.

The SVEP is subject to CEC and CEQA regulatory requirements. The project does not require review under federal regulations such as the National Historic Preservation Act (NHPA) and the Archaeological and Historic Preservation Act of 1974 (16 USC 469), among others, because it is not a federal undertaking (federally permitted or funded)

8.3.1 Affected Environment

Cultural resources are traces of human occupation and activity. In southern California, cultural resources extend back in time for at least 11,500 years. Written historical sources tell the story of the past 200 years. Archaeologists have reconstructed general trends of prehistory.

8.3.1.1 Natural Environment

The project site, including the associated linear facilities, is located in Perris Valley, which lies in the northern portion of the Peninsular Ranges Physiographic Province of California.

The climatic history of the region is as follows: during the Late Pleistocene (22,000 to 11,000 years before present [BP]), the region was characterized by cooler and wetter conditions supporting piñon-juniper woodlands, expansive deep lakes, and savannah grasslands at low elevations. During the Early Holocene (10,000 to 8,000 BP), there were gradual warming and drying conditions resulting in shrinking lakes and replacement of woodlands by creosote scrub communities at lower levels. In Middle to Late Holocene times (8,000 to present), warm and dry conditions continued, dominated by summer monsoons in the desert southwest, and winter storms along the Pacific Coast. Lakes in low-lying basins completely dried up or became ephemeral in nature. Locally specific fluctuations in temperature and aridity produced ecological variation of no greater magnitude than known from historical records.

A significant environmental change that occurred in the Late Holocene period was the formation of ancient Lake Cahuilla in the Salton Trough. An immense shoreline developed, which generated marshes and minor embayments that supported shellfish, fish, waterfowl, cattail, crustaceans, clams, large and small mammals, reptiles and amphibians, and other economically useful resources (Wilke, 1976, 1978). Lake Cahuilla attracted Indians from the Colorado River, the Mojave Desert, and the Peninsular Range. The lake first arose about 2000 years ago and its level depended on inflow from the Colorado River. There were long periods of wet as well as dry cycles, as demonstrated by successive beach line levels. The last high stand was about 400 years ago; then the waters evaporated rapidly after the Colorado River opened its former channel into the gulf. Within fifty years, the lacustrine bed became part of the desert floor once again (Wilke, 1978). Recent evidence suggests a fifth infilling between 1600 and 1700 AD (Schaeffer, 1994). When Lake Cahuilla dried up, the loss of this resource-rich environment probably created an economic crisis that required local Native peoples to adapt to rapidly changing conditions.

8.3.1.2 Prehistoric Background

8.3.1.2.1 Early Holocene Cultures (10,500-7200 BP)

Early cultures and peoples were adapted to the post-Pleistocene environment in which megafauna had largely disappeared and the hotter, drier climate had forced groups to settle near reliable water sources. As defined by Warren (1967), San Dieguito was a hunting

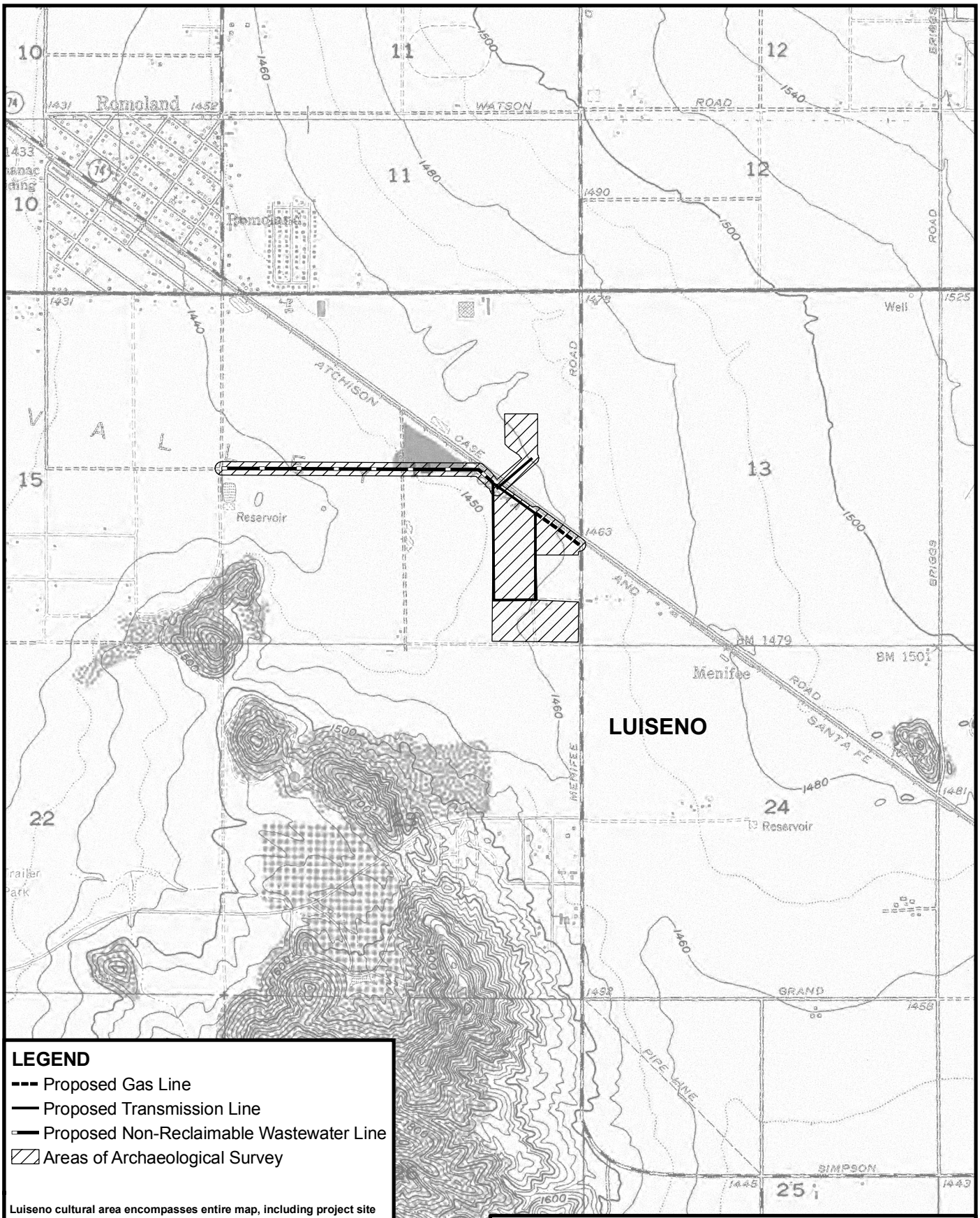

FIGURE 8.3-1
ETHNOGRAPHIC TERRITORY AND ARCHAEOLOGICAL SURVEY COVERAGE
SUN VALLEY ENERGY PROJECT
ROMOLAND, CALIFORNIA

CH2MHILL

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culture with a flaked stone industry that included large flake and core scrapers, choppers, hammerstones, drill, and gravers. While plant processing artifacts were nearly absent from the assemblage Warren described, there is now little doubt that these cultures used plant resources when available (Basgall and Hall, 1993). Archaeologists are still not sure about the origin of the San Dieguito culture and its transition to later periods. Erlandson and Colton (1991) suggested three models: (1) in situ development from earlier groups, (2) desert groups migrating to the coast to avoid Altithermal conditions, and (3) coastal migration from the north. The second model is the most widely accepted explanation for early coastal groups. As coastal settlement is pushed back further in time, however, the third model seems more likely (Grenda, 1997).

8.3.1.2.2 Early Middle Holocene Cultures

Malcolm Rogers (1939, 1945) was the first to describe the San Dieguito and La Jolla cultures, but he failed to explain the transition from one to the other. Warren et al. (1961) and Warren (1963) proposed that the La Jolla culture began around 7500 BP, when desert foragers moved west to avoid unfavorable Altithermal climates. It is suggested that the movement coincided with the diffusion of agave to the coast, and that the primary function of the scraper assemblage was to process agave and yucca. Moriarity (1966, 1967), found continuity between the San Dieguito and La Jolla culture and claimed the La Jolla developed from the earlier San Dieguito. Some (Bull, 1987, and Ezell, 1987) believe the two cultures were functional variants of the same culture, while others (Moriarty, 1987; Smith, 1987) believe them to be distinct cultures. Moratto (1984) combined some of these models.

Climatic warming after circa 6000 B.C. may have stimulated movements to the coast of desert peoples who then borrowed littoral adaptations from older groups while sharing them with their millingstone and scraper-plane technologies and seed- and agave-processing skills.

Another popular theory is coastal migration (Fladmark, 1967). Chartkoff and Chartkoff (1984) claim that as coastal settlement is pushed further back in time, the more likely it is that the settlers were not related to the Pleistocene hunters of the interior deserts. Meighan (1989) sees similarities between California and British Columbia/Alaska assemblages, while Erlandson and Colten (1991) see more close resemblance to interior desert assemblages. As Grenda (1997) explained, the major obstacle to resolving this controversy is that about 17,000 square kilometers of land have been inundated since the end of the last glacial (Carbone, 1991), effectively drowning most coastal sites. If Meighan (1989) is correct, there should be evidence of a coastal migration route at inundated offshore sites along the coast, and larger habitation sites with a material culture reflecting the Transitional period.

Scholars believe that subsistence patterns showed marked changes starting around 8500 BP, probably in response to Altithermal climatic conditions and the changing flora and fauna (Erlandson and Colten, 1991). These changes are seen as reduced numbers of projectile points, scrapers, and choppers, and an increase in ground stone artifacts. While hunting and fishing were not replaced by hard seed processing, the reliance on animals and fish decreased and the diet became more diversified, and diversity of adaptation was apparently the norm for middle Holocene cultures.

8.3.1.2.3 Middle Holocene Cultures (7200 to 3440 BP)

Middle Holocene cultures are commonly referred to as Milling Stone cultures the La Jolla culture was the coastal region's representative from this period (Wallace, 1978; Warren, 1967). La Jolla sites were usually located near the coast, especially around lagoons and bays, suggesting an ecological adaptation to shellfish and other coastal resources. Inland sites from the same time period are typically described as belonging to the Pauma culture; these sites had a similar material culture but were more sedentary and lacked shellfish (Meighan, 1954, True, 1958; Warren and True, 1961). Farther inland, the Sayles culture was a mixture of the Pinto culture and the Milling Stone groups of the coastal region (Grenda, 1997).

La Jolla Culture

La Jolla culture peoples exploited the coastal regions of Orange and San Diego Counties and La Jolla culture sites are recognized by ground stone assemblages in shell middens, usually on terraces around lagoons or bays. Harding (1951) divided the La Jolla into two phases, La Jolla I and II. The latter phase was defined by the presence of cemeteries, trade with the Channel Islands, and an improved lithic technology. The technology at La Jollan sites indicates a mixture of coastal and desert traits, as both scraper-plane and ground stone artifacts are found. La Jollan sites include shell middens, fire hearths, ground stone, flexed burials, and a very basic lithic assemblage. It appears that La Jollan assemblages represent a traditional phase from San Dieguito to Late Prehistoric cultures rather than a culture with distinct spatial and temporal boundaries (Grenda 1997:19).

Pauma Culture

Pauma sites are distinguished from La Jollan sites solely on their location. Pauma sites are generally found in inland valleys and sheltered canyons, out of reach of marine resources, whereas La Jollan sites hug the coastline and dot lagoon edges. True (1958), Warren et al. (1961), and Meighan (1954) describe Pauma sites as those that display a relatively more sedentary lifestyle and a greater reliance on gathering when compared to the San Dieguito culture. Pauma sites also contain many ground stone artifacts and a greater tool variety and lack shellfish remains. Artifact assemblages are similar to La Jollan sites, but subsistence practices are apparently more focused on terrestrial resources. Grenda (1997) summarizes:

> The difference between La Jollan and Pauma sites is primarily based on functional differences in the artifact assemblage. A greater tool variety indicates a greater reliance on terrestrial resources than La Jollan sites. This adaptation is most likely the result of terrestrial resource availability in the settlement area than cultural differences. It appears that any "close relationship" between the two could be explained by viewing the two cultures as functional variants of the same culture.

Sayles Culture

Between the Mojave Desert (exploited by the Pinto Basin culture) and the coast (exploited by the La Jollan and Pauma cultures) was a culture that apparently used resources from both the desert and coastal regions. The Sayles culture sites exhibit ground stone assemblages that also include percussion-flaked scraper planes, cores, planoconvex scrapers, choppers, and hammerstones (Kowta, 1969). Moratto (1984) views this culture as one that blended traits of the Pinto Basin culture of the Mojave Desert and the Milling Stone cultures of southern California. Sayles culture subsistence patterns were based on

opportunistic hunting of deer, rabbit, and other small game animals, as well as floral resources such as juniper berries and hard seeds (Basgall and True, 1985). While investigations suggest that resources were available on a year-round basis, a limited variety of tools within artifact assemblages suggest a more seasonal use of sites. From what little is known about the Sayles culture, it probably represented the Transitional period between the early hunting and later gathering cultures (Grenda, 1997).

8.3.1.2.4 Late Holocene Cultures (3440 to 168 years BP)

While Millingstone cultures survived into the late Holocene in many areas of southern California, some clear changes took place around A.D. 500. Late Prehistoric cultures in the region reflected both in situ cultural adaptations in response to environmental changes and outside influences from the Shoshonean (Takic) intruders of the desert regions (Moratto, 1984). As with earlier periods, cultural distinctions are often subtle. The Late Prehistoric period in the project area is represented by the San Luis Rey (SLR) culture and has been equated with the historically known Luiseño (True 1966). The SLR has been divided into two phases, SLR I (A.D. 1400-1750) based on the absence of ceramics, cremations and rock paintings, and SLR II (A.D. 1750-1850), which included use of ceramics, cremations and rock paintings. The SLR culture's subsistence pattern probably consisted of small game hunting and the gathering of seeds and nuts, especially acorns. As summarized by Grenda (1997:21), three relatively distinct settlement patterns occurred during the SLR period:

> The first pattern was characterized by scattered temporary sites, suggesting a relatively mobile population. A shift to more sedentary settlements located where streams emerged from canyons took place in the late SLR I or early SLR II period. True (1982) propose that, accompanying this shift, a formalized winter-summer seasonal round became established. Finally, during late prehistoric or protohistoric times, the "one village per drainage" pattern shifted to a more complex consolidated village pattern. This last shift was probably stimulated by contact with missionaries and other settlers, and other factors such as drought and resource competition. At that time, the subsistence patterns of the San Luis Rey culture began to incorporate nonnative plants and animals and focus less on coastal resources (Bean and Shipek, 1978; Moratto, 1984). Based on ethnographic and ethnohistoric accounts of early contacts with the culture, the settlement pattern was similar to the later Luiseño rancherias. Small settlements were located from the river basin to the higher mountain slopes and were occupied on a seasonal basis depending on resource availability.

8.3.1.2.5 Archaeological Sensitivity of the Project Area

The Perris Valley is a poorly watered region punctuated by small rocky hills. In Late Prehistoric times the vegetation consisted of at least three plant communities: Coastal Sage Scrub, Valley Grassland, and Freshwater Marsh. Each of these plant communities offered numerous plant resources that were utilized by the Native Americans. The climate of the region is classified as Mediterranean or "summer-dry subtropical" and is characterized by long, hot, dry, summers and mild, relatively wet winters. Annual precipitation is winter-dominant and normally averages between 50 and 65 centimeters (McCarthy, 1987).

The area was generally considered unappealing to European settlers until advances in dry land farming techniques, well drilling, and irrigation were made in the late nineteenth century. Although there was some gold mining activity in the hills, permanent European settlements did not occur until the 1880s.

Prehistoric sites known from the project area, including some well-known petroglyphs, have mostly been found in the rocky hills. Extensive surveys conducted for the Metropolitan Water District Inland Feeder and Reservoirs projects, and the Domenigoni Reservoir projects have documented this.

8.3.1.3 Ethnographic Background

The project area is located between the territories of two tribes, the Luiseño and the Cahuilla (Figure 8.3-1). Luiseño territory included southwestern Riverside County, while the Cahuilla territory extended from the Perris Plain eastward across the San Jacinto mountains. The two groups, while definitely separate socio-political entities, have linguistic similarities and in aboriginal times shared settlement/subsistence systems that were identical in many ways (McCarthy, 1987).

The Luiseño Indians are those California aboriginal peoples and their descendants who were brought under the jurisdiction of Mission San Luis Rey de Francia, which is located near Oceanside, California, with a subsidiary mission located near the current town of Pala. The Luiseño spoke a language that belongs to the Takic branch of the Uto-Aztecan language family (Bean and Shipek, 1978). Kroeber suggested that the Luiseño were part of the Shoshonean group that originated in the Great Basin, and migrated into the southern California coastal region 1,500 years ago (Kroeber, 1925). The Luiseño cultural territory covers about 1,500 square miles and includes parts of San Diego and Riverside counties. According to Bean and Shipek (1978), Luiseño territory extended from Agua Hediona Creek northwest to Aliso Creek along the coast, then east to Santiago Peak and south through the Lake Elsinore area to just south of Mount Palomar.

The Luiseño, through complex social organizations and mechanisms, such as clan-governed districts and seasonal movements of populations throughout the region, followed a planned program of resource use to exploit the abundant plants and animals and support a large population. Seasonal exploitation of acorns and small game was combined with the exploitation of coastal resources during the balance of the year.

The terrestrial biomes indigenous to the Luiseño territory included montane forests, riparian woodland, and chaparral. The montane forests are located at elevations between 2000 and 8000 feet. The principal trees utilized by the Luiseño Indians in this environment were members of the oak family. Acorns were the most important food resource for the Luiseño and Cahuilla Indians. Riparian Woodland areas are located along waterways streams, and perennial rivers. Plants indigenous to this area are deciduous trees, shrubs, and herbaceous plants. Many of these plants are also important sources of food and medicine for Indians in the region. Chaparral includes those grasses, shrubs, and low vegetation typical of the dry, hot southern California lowlands. The Luiseño and Cahuilla utilized the grasses and desert plants typical of this area for both food and medicines (Bean and Shipek 1978:551). Early explorers to the region noted that the area had more locally

available water than it does today, and they provided descriptions of lush vegetation and numerous mentions of water pools.

The Luiseño and Cahuilla Indians, while predominantly sedentary, also traveled within their territories for seasonal harvests. For food, they utilized a wide range of both plant and animal life. Acorns, various seeds, cactus, fruits, plant leaves, stems and roots were all processed for food. Animals utilized as food were deer, rabbit, wood rats, ground squirrels, mice and grasshoppers.

Villages were usually located in defendable canyons or coves along the slopes near good water supplies (Bean and Shipek 1978). Village populations ranged between 50 and 200, with the larger ones spawning nearby satellite villages. White (1963) estimated Luiseño population to have been 10,000 (based on 50 villages with an average of 200 people in each). In 1925, their population was less than 500; decimated mostly by introduced diseases.

Geography is an important factor in predicting the location of archaeological sites. It is known that the Mediterranean type climate provided a diverse ecological niche that these prehistoric people exploited to lead a predominately sedentary lifestyle without agriculture. The all-important acorns were only a day's walk from the villages. Grasses, fruits, deer, rabbit and a variety of other plants and animals used by the Luiseño and Cahuilla were all locally available. The geologic aspect of the geography also played an important role in the Luiseño lifestyle because the landscape was scattered with outcrops of granite bedrock. The mortar holes used in food processing are found throughout the vicinity in these outcroppings. An analysis of their pottery has revealed that the Luiseño used locally available clays and rock in their ceramic production. Manos, metates, projectile points, knives, scrapers and other stone implements were also fashioned from locally available quartzite, quartz crystals, and basalt. It is surmised that the Luiseño and Cahuilla traded with their neighbors to the north and south by sourcing the obsidian (volcanic glass) found at the site. Obsidian source analysis indicates that obsidian was traded with people from sources near the Salton Sea to the south, and from the Coso range to the north.

The Spanish government established a series of missions to pacify and Christianize the Indians, ideally to convert them to stable, tax-paying citizens of New Spain. For the most part, however, the Luiseño maintained their previous settlement patterns and political leadership. The success of the mission started to decline in 1833, when a decree of emancipation of the Indians was passed, and in 1835 the missions were confiscated by the Mexican government. Mission lands were then granted to individuals.

A number of factors led to the decline of the Native American lifeways, including the Gold Rush and the grant of statehood to California (and the great numbers of Euroamericans who came to settle). Additional stress to the Luiseño and Cahuilla lifeways came with the secularization of the mission and the split-up of the lands to private individuals.

8.3.1.4 Historical Background

8.3.1.4.1 Hispanic Period

The project area was somewhat marginal to human occupation after the first Spanish contact in the 1500s. The climate was entering another dry period, evidenced by the disappearance of Lake Cahuilla. The SVEP area, like other parts of southern California, went through three historic phases of Euroamerican development: Spanish imperialism and

missionization (1540-1821), Mexican and American frontier development (1821-1881), and post-railroad modernization (1880-present). Significant settlement did not occur throughout the project area until the period of Mexican and American frontier development.

As explained by Grenda (1997), the Spanish were interested in establishing a mission between San Diego and San Juan Capistrano and were drawn to the San Luis Rey River valley because of its water supply, abundant vegetation and large native Luiseño Indian population. Many Luiseño were brought to the mission, where they were taught the Christian faith, the Spanish language, and crafts (Shipek and Bean, 1978). A subsidiary Mission was established at San Antonio de la Pala, approximately 40 miles south of the project area, and a mission rancho was located in Temecula. The San Gabriel mission established a subsidiary mission or "assistencia" west of the current city of Redlands, 30 miles north of the project area. The success of the mission started to decline in 1833, when a decree of emancipation of the Indians was passed, and in 1835 the mission was confiscated by the Mexican government. Mission lands were then granted to private citizens by the Mexican Government throughout California, primarily, but not exclusively, to "Californios" (second generation, native-born descendants of early soldiers and civil servants under Spanish and then Mexican rule). Near the project area, grants were made in Temecula and what would become Riverside. Some areas in the Perris Valley were part of the Sobrante de San Jacinto, granted to Maria del Rosario and Estudillo de Aguirre on May 9, 1846.

8.3.1.4.2 American Period

Following the Mexican War of 1848, the project area came under the control of the United States government; however, most human activity and settlement continued to take place in the wetter valleys north and south of the Perris Valley. The Perris Valley was described as "a great treeless desert", "A barren plain with rocky hills,…barely fit for a sheep pasture…where nothing but a jackrabbit could live" (Holmes, 1912). Gold mining was active on a small scale through the hills, and the valley was suitable for dry farming in a good year.

It was the arrival of the railroad that brought permanent American settlements to the Perris Valley area in the 1880s, by way of Riverside. By 1881 the California Southern established a station named Pinacate. This station served the nearby gold mines with service to San Diego. The town of Perris developed nearby, named after the Chief Engineer and Surveyor of the Railroad. The next year the tracks were extended to Riverside. With easy access by rail and improvements in irrigation technology that had been used with stunning success in the Riverside area, towns sprouted throughout the valley.

A scheme to bring water to the Moreno area from the Bear Valley reservoir was begun in 1890, and water began to flow into the valley by 1891. The progenitor of this scheme was F.E. Brown, who had been one of the founders of Redlands, another town whose existence depended upon irrigation. Grateful citizens had hoped to name their new town after Mr. Brown, but he was a modest man and declined the honor. So the settlement became known as Moreno, which means "brown" in Spanish. Many acres were planted to citrus and the area prospered. A series of drought years in the late 1890s, however, led to a serious drop in the level of the Bear Valley reservoir, and a series of court decisions granted what water was available to users who had established earlier claims. Without irrigation, the citrus groves were unable to survive the long dry summers, and the brief period of

prosperity was over. European newspapers reported the Perris Valley as "A Valley on Wheels" as farms was abandoned and the newly built houses jacked up and moved to the more reliably watered Riverside area (Holmes, 1912). Dry land farmers remained in the area, and successfully experimented with drilling wells for irrigation and growing high value forage crops such as alfalfa, regional land use continued to be mainly dry-land farming. Irrigation has been important to the development of the area, and remnants of increasingly efficient systems can be seen, from unlined ditches to culvert-and-standpipe to modern portable aluminum pipe systems. Water from the Colorado River became available and, after World War II, the area became an important potato growing center. Rising water costs and a potato blight put an end to this enterprise in the 1960s. Concurrently, with the inception of the Del Webb Sun City development, land use steadily became oriented toward residential and retail/commercial development. Crop land continues to be developed for housing to this day.

8.3.1.5 Resources Inventory

The SVEP site and linear facilities were subject to 100 percent (or complete) cultural resources inventory. This inventory is based on both archive/background research and surface pedestrian reconnaissance survey. The results of the resource inventory are presented in the sections below.

8.3.1.5.1 Archival Research

Staff of the Eastern Center of the California Historical Resources Information System (CHRIS) at University of California, Riverside in Riverside, California conducted a detailed record search for the SVEP (CHRIS Eastern Information Center [EIC] File No. 3494). The literature search included the entire project area, the associated linear facilities, and all areas within one half-mile of the project site and linear facilities (study area).

According to information available in the CHRIS files, there have been seven previous cultural resource surveys conducted within the study area. There are no historic properties within the study area listed in, or determined eligible for listing in, the National Register of Historic Places (NRHP) (nor in the California Register of Historical Resources [CRHR], the California Inventory of Historic Places, the California Points of Historic Interest, or California State Historic Landmarks).

Seven individual cultural resource investigation report references were provided by CHRIS for the study area. In one case, a previous investigation partly overlaps the SVEP site. Arranged in ascending order as cataloged by CHRIS, the reports listed in Table 8.3-1 were reviewed for information pertinent to the SVEP.

TABLE 8.3-1
Cultural Resource Investigation Reports Within a Half-Mile of the SVEP

Wells (1975) – EIC1080236	Bouscaren (1984) – EIC1082217
Greenwood (1980) – EIC1081398	Drover (1988) – EIC1082805
Rector (1981) – EIC1081462	Smith (2000) – EIC1085879
McCarthy (1983) – EIC1081951	

The record search revealed that there are six previously recorded properties within the study area. Table 8.3-2 provides the site designation, site name or characteristics and potential project effects. All of theses sites are situated well outside the area of potential effects (APE) of SVEP and will not be affected.

TABLE 8.3-2
Previously Recorded Sites within a Half-Mile of the SVEP Site and Linear Features

Site	Description	NR Eligibility	Potential Effect
33-9724	Concrete Features	Not Eligible	None-Outside APE
33-9725	Concrete Features and Sparse Artifact Scatter	Not Eligible	None-Outside APE
33-9726	Concrete Features	Not Eligible	None-Outside APE
CA-RIV-6846H	Roadside Refuse Scatter and Bedrock Milling Features	Not Eligible	None-Outside APE
CA-RIV-7129	Bedrock Milling Features and Lithic Material	Not Eligible	None-Outside APE
CA-RIV-7130	Lithic Scatter	Not Eligible	None-Outside APE

- **33-9724—** This site consists of a 675 foot long concrete trough and the remains of six concrete slabs. The site is loosely dated between 1920 and 1960 and is associated with a farming operation. Site integrity is recorded as fair and research potential is considered limited. The site was evaluated in 2000 as not eligible for nomination to the NRHP or CRHP.

- **33-9725—** This site consists of two concrete slabs, a cinder block structure, and a sparse artifact scatter. Site integrity is recorded as poor and research potential is considered limited. The site is loosely dated between 1920 and 1960 and is interpreted to be related to dairy farming. The site was evaluated in 2000 as not eligible for nomination to the NRHP or CRHP.

- **33-9726—** This site consists of a concrete pad, a loading/unloading structure, and a large pit. The site is interpreted as a stockyard/cattle staging area. The site is loosely dated between 1948 and 1960 and interpreted as related to the dairy/cattle industry. Site integrity is recorded as fair and research potential is considered limited. The site was evaluated in 2000 as not eligible for nomination to the NRHP or CRHP.

- **CA-RIV-6846H—** This site consists of a historic refuse scatter and ten prehistoric bedrock milling features. Historic artifacts include fragments domestic artifacts of glass and metal as well as building materials such as brick, metal, wire, and wood. Seven prehistoric bedrock milling features are also identified with a total of 10 individual slicks. Most of the historic refuse dates to before 1920. Site integrity is recorded as fair. Portions of the site have been impacted by farming. Twenty test units were conducted at the site and all cultural material appears to have been collected during the site recording (site form notes that 7,521 artifacts were collected). Though the site was not formally evaluated, it does not appear to meet any criteria for nomination to the NRHP or CRHP.

- **CA-RIV-7129—** This site consists of six prehistoric bedrock milling features and seven pieces of lithic debitage. Portions of the site have been impacted by farming and site

integrity is recorded as good. Though the site was not formally evaluated, it does not appear to meet any criteria for nomination to the NRHP or CRHP.

- **CA-RIV-7130—** This prehistoric site consists of 25 pieces of lithic debitage and a fragment of a portable metate. The site has been heavily impacted by agricultural activity. Though the site was not formally evaluated, it does not appear to meet any criteria for nomination to the NRHP or CRHP.

8.3.1.5.2 Field Survey

Site Conditions

The SVEP will be located in an unincorporated area of Riverside County, near the community of Romoland, 22 miles south of Riverside, south and east of Perris, and east of Sun City. The site is characterized by agricultural lands, developed areas, and agricultural fields. The proposed plant site includes approximately 20 acres of land that is planned for industrial use but is agricultural land that is currently cultivated with wheat. Land use surrounding the project site includes agriculture, residential development and industrial areas. The plant site is surrounded on three sides by wheat fields and a single residence located to the southeast of the site. A fenced equipment storage yard is located immediately to the northeast of the site and the Burlington Northern and Santa Fe (BNSF) railroad tracks parallel the northern property line. The Valley Substation and a wood recycling facility are located on the north side of Mathews Road. Reclaimed water, sanitary sewer, natural gas, and potable water are all available either on the project parcel or immediately adjacent to it.

A pedestrian survey was conducted by Clint Helton, M.A., RPA of the entire APE of the proposed power plant site and linear facilities on September 21, 2005. Survey of the plant site and the transmission line/tower were conducted using 20 meter transects and linear facilities (natural gas pipeline, water supply pipeline) were conducted at 15 meter transects. The area surveyed for cultural resources is depicted in Figure 8.3-1. Ground visibility during the survey ranged between 20 and 100 percent. No historic or prehistoric resources were observed during the survey. Opportunistic use was made of any visible ground or bare spots. No artifacts were collected in the course of the survey. Pedestrian survey by the archaeologist revealed no known archaeological resources.

Given the amount of previous agricultural disturbance in the area, it seems likely that many resources in the area would have been disturbed. The archaeological sensitivity of the project site is considered low.

Plant Site

The plant site is located on approximately 20 acres of land that is zoned for industrial uses but that is currently in agricultural use near intersection of Menifee Road and Matthews Road, just south of the community of Romoland. A pedestrian archaeological survey was conducted for the entire 20 acre plant site using 20 meter parallel transects. The area is currently planted in wheat and ground visibility averaged 40 percent. No prehistoric or historic cultural remains were observed at the plant site.

Natural Gas Pipeline

The proposed 12-inch-diameter natural gas pipeline will run approximately 750 feet from the facility site to the southeast along the northern property boundary to SoCalGas high pressure pipelines at Menifee Road. The primary method of construction is excavation of a 4-foot deep and 3 to 7 foot wide open trench, with a construction corridor of 50 to 75 feet

that will be used to store excavated soils, pipeline materials and construction equipment. Construction of the pipeline would be within the existing dirt road. Minimal clearing of ruderal roadside vegetation may be required in some areas, but no natural habitat, tress or wetland areas would be affected by the pipeline construction.

Project archaeologists surveyed the gas line using two 15-meter transects to inspect the gas line centerline and 50 feet on each side of the center line. Ground cover was a mix of agricultural fields and sparsely vegetated ditches. No prehistoric or historic cultural remains were observed.

Non-Reclaimable Waste Water Return Pipeline

Non-reclaimable waste water will be returned through a 0.75-mile-long pipeline that will connect the Inland Empire Energy Center brine line at McLaughlin Road and Antelope Road. The pipeline will be located entirely within the unpaved roadway of Matthews Road and McLaughlin Road.

The right-of-way (ROW) was intensively surveyed, using two 15-meter transects to inspect the water line centerline (located within the roadway), and 50 feet on each side. Visibility ranged between 80 and 100 percent. Ground cover was a mix of plowed agricultural fields and sparsely vegetated ditches. Modern trash was present, but scattered. No prehistoric or historic cultural remains were observed.

Electrical Transmission Line

SVEP will connect to Southern California Edison's (SCE) electrical transmission system and nearby Valley Substation via an approximately 600-foot-long transmission line. (Project archaeologists surveyed the entire southwest corner (outside of the fenced area) of the existing SCE Valley Substation where a single transmission tower may be required. Visibility averaged 40 percent, and ground cover consisted mainly of low weeds. No prehistoric or historic cultural remains were observed.

8.3.1.5.3 Native American Consultation

Project staff contacted the Native American Heritage Commission (NAHC) by letter on August 24, 2005, to request information about traditional cultural properties such as cemeteries and sacred places in the project area. The NAHC responded on September 1, 2005 with a list of Native Americans interested in consulting on development projects (See Appendix 8.3A). Each of these individuals/groups was contacted by letter. Responses were received from several groups, and these are summarized in Appendix 8.3A. None of these responses resulted in the identification of specific archaeological or traditional cultural properties in the project area.

The NAHC record search of the Sacred Lands file failed to indicate the presence of Native American cultural resources in the immediate project area. The record search conducted at the Eastern Information Center of CHRIS also failed to indicate the presence of Native American traditional cultural properties.

8.3.1.5.4 Architectural Reconnaissance

Project staff also conducted a reconnaissance of the immediate project area to determine whether or not there are potentially historic buildings and structures on the project parcel or in the immediate project area. There are no standing buildings on the project parcel and there are no standing buildings older than 45 years on adjacent or nearby parcels or located

along the natural gas pipeline or non-reclaimable waste water line. The only structure older than 45 years near the project site is the BNSF Railway, which is in active use and runs immediately north of the project parcel. The project's effects on this property, however, would be negligible. Although the project will involve a temporary construction crossing of the BNSF Railway at Matthews Road and will apply to make this a permanent crossing, the addition of a crossing would be a negligible effect on this property. For this reason, project staff did not record or further evaluate this property.

8.3.2 Environmental Consequences

This section describes the environmental consequences of proposed SVEP construction.

8.3.2.1 Significance Criteria

Appendix G, Environmental Checklist Form, of CEQA addresses significance criteria with respect to cultural resources (Public Resources Code Sections 21000 et seq.). Appendix G (V)(a,b,d) indicates that an impact would be significant if the project will:

- Cause a substantial adverse change in the significance of a historical resource.
- Cause a substantial adverse change in the significance of an archaeological resource.
- Disturb any human remains, including those interred outside of formal cemeteries.

Literature search, pedestrian field inventory, and architectural reconnaissance did not result in the discovery of any significant prehistoric or historic archaeological remains, traditional cultural properties, or any historically or architecturally significant buildings in the project's area of potential effects.

8.3.2.2 Construction Impacts

There are no prehistoric or historic archaeological sites located within the power plant site area, nor are there any located within the APE of the proposed natural gas pipeline route, water pipeline route, or transmission tower within the SCE Valley Substation boundary. The BNSF railroad lies between the power plant location and the Valley Substation. However, no portion of the railroad ROW will be significantly impacted by the project.

It is possible, however, that the project could encounter buried cultural resources that have not previously been discovered during the construction phase of the project. This is unlikely, given the low archaeological sensitivity of the project site. The project area is located approximately six miles from the nearest water source, and known archaeological resources in the general area are focused within low foothills with granite outcrops where bedrock milling slicks are more common. The SVEP area is lacking any known environmental setting or condition that would be considered indicative of high archaeological sensitivity. Moreover, the site has been heavily impacted during the last century by agricultural activity. The discovery of previously undiscovered archeological resources during construction is therefore unlikely.

8.3.2.3 Operation Impacts

No ground disturbance would be required during project operation. Therefore, impacts to cultural resources are not anticipated during operation of the proposed facility. Maintenance of all project facilities will not cause any effects outside of the initial construction area of impact.

8.3.3 Cumulative Impacts

Because the SVEP would not affect known significant cultural resources, it would not be likely to cause significant cumulative impacts. If construction were to encounter a large, stratified, buried prehistoric archaeological site or discrete filled-in historic period features, the possibility of cumulative impacts would arise because such sites might be highly significant, and many have been destroyed or damaged by agricultural activity and/or commercial/industrial/residential development in the project vicinity. Any potential impact to an unknown site would be minimized by a stop-work procedure if a site were uncovered. No impacts on architectural resources are expected to occur.

8.3.4 Mitigation Measures

Although significant archaeological and historical sites were not found during project field survey, it is possible that subsurface construction could encounter buried archaeological remains. Appropriate measures would include a requirement that construction stop if cultural resources are inadvertently discovered. These measures include: (1) retaining a Designated Cultural Resources Specialist (CRS) to be on-call to investigate any cultural resources finds made during construction, (2) implementing a construction worker training program, (3) providing procedures for halting construction in the event that there is an inadvertent discovery of archaeological deposits or human remains, (4) providing procedures for evaluating an inadvertent archaeological discovery; and (5) providing procedures to mitigate adverse impacts on any inadvertent archaeological discovery determined to be significant.

8.3.4.1 Designated Cultural Resources Specialist

The project owner will retain a Designated CRS who will be available during the entire construction period to inspect and evaluate any finds of buried archaeological resources that might occur during construction. If there is a discovery of archaeological remains during construction, the CRS, in conjunction with the Construction Superintendent and Environmental Compliance Manager, will make certain that all construction activity stops in the immediate vicinity of the find until the find can be evaluated. The CRS will inspect the find and evaluate its potential significance, in consultation with CEC staff and the CEC Compliance Project Manager (CPM). The CRS will make a recommendation as to the significance of the find and any measures that would mitigate adverse impacts of construction on significant find.

The CRS will meet the minimum qualifications for Principal Investigator on federal projects under the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation. The CRS will be qualified, in addition to site detection, to evaluate the significance of the deposits, consult with regulatory agencies, and plan site evaluation and mitigation activities.

8.3.4.2 Construction Worker Training

Implementation of a construction worker training program would ensure implementation of CEC-approved stop-construction measures in the event that cultural resources are discovered during construction. The designated CRS will conduct a worker education session for construction supervisory personnel to explain the importance of, and legal basis

for, the protection of significant archaeological resources. The training will include photographs of various types of historic and prehistoric artifacts and will describe the specific steps that will be taken in the event of an unanticipated discovery of cultural material, to include human remains. The training will also be recorded on DVD and copies will be distributed to all construction personnel.

8.3.4.3 Monitoring

Owing to the low archaeological sensitivity of the SVEP project site and lack of any evidence of archaeological sites during the surface reconnaissance, continuous monitoring of SVEP construction is not necessary.

8.3.4.4 Emergency Discovery

If the construction staff or others identify archaeological resources during construction, they will immediately notify the CRS and the site superintendent, who will halt construction in the immediate vicinity of the find, if necessary. The CRS will use flagging tape, rope, or some other means as necessary to delineate the area of the find within which construction will halt. This area will include the excavation trench from which the archaeological finds came as well as any piles of dirt or rock spoil from that area. Construction will not take place within the delineated find area until the CRS, in consultation with the CEC staff, can inspect and evaluate the find.

If human remains are encountered during construction, project officials are required by law (California Health and Safety Code 7050.5) to contact the county coroner. If the coroner determines that the find is Native American, the coroner is required to contact the NAHC. The NAHC is required (Public Resources Code 5097.98) to determine the Most Likely Descendant (MLD), notify that person or persons and request that they inspect the burial and make recommendations for treatment or disposal.

8.3.4.5 Site Recording and Evaluation

The CRS will follow accepted professional standards in recording any find and will submit the standard Department of Parks and Recreation historic site form (Form DPR 523) and locational information to the Eastern Information Center of CHRIS.

If the CRS determines that the find is not significant, construction will proceed. If the CRS determines that further information is needed to determine whether the find is significant, the CEC and State Historic Preservation Officer (SHPO) will be notified, and the CRS will prepare a plan and a timetable for evaluating the find, in consultation with the CEC and SHPO.

8.3.4.6 Mitigation Planning

If the CRS and the consulting parties (CEC staff and SHPO) determine that the find is significant, they will prepare and carry out a mitigation plan in accordance with state and federal guidelines. This plan will emphasize the avoidance, if possible, of significant archaeological resources. If avoidance is not possible, recovery of a sample of the deposit from which archaeologists can define scientific data to address archaeological research questions will be considered an effective mitigation measure for damage to or destruction of the deposit.

The mitigation program, if necessary, will be carried out as soon as possible to avoid construction delays. Construction will resume at the site as soon as the field data collection phase of any data recovery efforts is completed. The CRS will verify the completion of field data collection by letter to the project owner and the CEC CPM so that the project owner and the CEC CPM can authorize resuming construction.

8.3.4.7 Curation

The CRS will arrange for curation of archaeological materials collected during the monitoring and mitigation program at a qualified curation facility, that is, a recognized, nonprofit archaeological repository with a permanent curator. The CRS will submit field notes, stratigraphic drawings, and other materials developed as part of the archaeological excavation program to the curation facility along with the archaeological collection.

8.3.4.8 Report of Findings

If buried archaeological deposits are found during construction, the CRS will prepare a report summarizing the monitoring and archaeological investigatory program implemented to evaluate the find or to recover data from an archaeological site as a mitigation measure. This report will describe the site soils and stratigraphy, describe and analyze artifacts and other materials recovered, and explain the site's significance. This report will be submitted to the curation facility with the collection.

8.3.4.9 Inadvertent Discovery of Human Burials

If human remains are found during construction, project officials are required by the California Health and Safety Code (Section 7050.5) to contact the County Coroner. If the Coroner determines that the find is Native American, he/she must contact the NAHC. The NAHC, as required by the Public Resources Code (Section 5097.98) determines and notifies the MLD, and requests the MLD to inspect the burial and make recommendations for treatment or disposal.

8.3.5 Laws, Ordinances, Regulations and Standards

A summary of applicable LORS is provided in Table 8.3-3.

TABLE 8.3-3
Applicable Cultural Resource Laws, Ordinances, Regulations, and Standards

Law, Ordinance, Regulation, or Standard	Applicability	Project Conformity?
California Environment Quality Act Guidelines	Project construction may encounter archaeological resources	Yes
Health and Safety Code Section 7050.5	Construction may encounter Native American graves, Coroner calls NAHC	Yes
Public Resources Code Section 5097.98	Construction may encounter Native American graves, NAHC assigns MLD	Yes
Public Resources Code Section 5097.5/5097.9	Would apply only if some project land were acquired by the state (currently no state land)	Yes
County of Riverside, General Plan Section 7.1.2 and Section 7.1.3	Sets goals to protect valuable architectural, historical, archaeological and cultural resources.	Yes

8.3.5.1 Federal Laws, Ordinances, Regulations, and Standards

Federal protection for significant archaeological resources would apply to the SVEP if any construction or other related project impacts take place on federally managed lands, or if certain federal entitlements were required. Federal legislative protection for cultural resources stems from the NHPA, which calls for protection of historic landmarks, historic and prehistoric structures, and other objects of historic or cultural interest on federal land. The project does not cross such lands, and no federal entitlement is required that would involve paleontologic resources mitigation requirements. Federal requirements would apply if a Federal agency obtained ownership of project lands during the term of the project license or if the project were to require a federal permit or funding.

8.3.5.2 State of California Statutes

CEQA requires review to determine if a project will have a significant effect on archaeological sites or a property of historic or cultural significance to a community or ethnic group eligible for inclusion in the CRHR (CEQA Guidelines). CEQA equates a substantial adverse change in the significance of a historical resource with a significant effect on the environment (Section 21084.1 of the Public Resources Code) and defines substantial adverse change as demolition, destruction, relocation, or alteration that would impair historical significance (Section 5020.1). Section 21084.1 stipulates that any resource listed in, or eligible for listing in, the CRHR[3] is presumed to be historically or culturally significant.[4]

Resources listed in a local historic register or deemed significant in a historical resource survey (as provided under Section 5024.1g) are presumed historically or culturally significant unless the preponderance of evidence demonstrates they are not.

A resource that is not listed in or determined to be eligible for listing in the CRHR, is not included in a local register of historic resources, nor deemed significant in a historical resource survey, may nonetheless be historically significant (Section 21084.1; see Section 21098.1).

CEQA requires a Lead Agency to identify and examine environmental effects that may result in significant adverse effects. Where a project may adversely affect a unique archaeological resource,[5] Section 21083.2 requires the Lead Agency to treat that effect as a significant environmental effect and prepare an Environmental Impact Report (EIR).

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3 The CRHR is a listing of "…those properties which are to be protected from substantial adverse change." Any resource eligible for listing in the California Register is also to be considered under CEQA.

4 A historical resource may be listed in the CRHR if it meets one or more of the following criteria: "(1) is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; (2) is associated with the lives of persons important to local, California or national history; (3) embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or (4) has yielded or has the potential to yield information important in prehistory or history (…of the local area, California or the nation)" (Public Resources Code §5024.1, Title 14 CCR, Section 4852). Automatic CRHR listings include NRHP-listed and determined eligible historic properties (either by the Keeper of the NRHP or through a consensus determination on a project review); State Historical Landmarks from number 770 onward; and Points of Historical Interest nominated from January 1998 onward. Landmarks prior to 770 and Points of Historical Interest may be listed through an action of the State Historical Resources Commission.

5 Public Resources Code 21083.2 (g) defines a unique archaeological resource to be: An archaeological artifact, object, or site, about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria: (1) contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information; (2) has a special and particular quality such as being the oldest of its type or the best available example of its type; or (3) is directly associated with a scientifically recognized important prehistoric or historic event or person.

When an archaeological resource is listed in or is eligible to be listed in the CRHR, Section 21084.1 requires that any substantial adverse effect to that resource be considered a significant environmental effect. Sections 21083.2 and 21084.1 operate independently to ensure that potential effects on archaeological resources are considered as part of a project's environmental analysis. Either of these benchmarks may indicate that a project may have a potential adverse effect on archaeological resources.

Other state-level requirements for cultural resources management appear in the California Public Resources Code Chapter 1.7, Section 5097.5 (Archaeological, Paleontological, and Historical Sites), and Chapter 1.75, beginning at Section 5097.9 (Native American Historical, Cultural, and Sacred Sites) for lands owned by the state or a state agency.

The disposition of Native American burials is governed by Section 7050.5 of the California Health and Safety Code and Sections 5097.94 and 5097.98 of the Public Resources Code, and falls within the jurisdiction of the NAHC.

If human remains are discovered, the County Coroner must be notified within 48 hours and there should be no further disturbance to the site where the remains were found. If the remains are determined by the coroner to be Native American, the Coroner is responsible for contacting the NAHC within 24 hours. The NAHC, pursuant to Section 5097.98, will immediately notify those persons it believes to be the MLD of the deceased Native American so they can inspect the burial site and make recommendations for treatment or disposal.

8.3.5.3 Riverside County

Although the CEC has pre-emptive authority over local laws, it typically requires compliance with local laws, ordinances, regulations, standards, plans, and policies.

County of Riverside General Plan— The County of Riverside General Plan identifies and documents significant historic and prehistoric resources, and provides for the preservation of representative and worthy examples. In addition, the Plan recognizes the value of historic and prehistoric resources, and assesses current and proposed land uses for impacts upon those resources. The County of Riverside has also drafted its own requirements regarding the preparation of cultural resources reports for privately initiated development projects (updated March 1993), entitled, Requirements for the Preparation and Review of Archaeological and Biological Reports.

8.3.6 Involved Agencies and Agency Contacts

Table 8.3-4 lists the state agencies involved in cultural resources management for the project and a contact person at each agency. These agencies include the NAHC and, for federal lands, the Office of Historic Preservation (OHP).

TABLE 8.3-4
Agency Contacts

Issue	Contact	Title	Telephone
Native American traditional cultural properties	Ms. Debbie Pilas-Treadway	Associate Governmental Program Analyst	(916) 653-4038
Federal agency NHPA Section 106 compliance	Milford Wayne Donaldson Office of Historic Preservation	State Historic Preservation Officer	(916) 653-6624

8.3.7 Permits Required and Schedule

Other than certification by the CEC, no state, federal, or local permits are required by the project for the management of cultural resources. Consultation with SHPO and the Advisory Council on Historic Preservation would be required under Section 106 of the NHPA if, for example, as the result of a later project change, the project were to become a federal undertaking and significant cultural resources could be were likely to be affected by the project.

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